

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fuel reforming apparatus for reforming a raw fuel containing a hydrocarbon-containing compound so as to produce a hydrogen-rich fuel gas for use in a fuel cell, comprising:

a reformer including a reforming catalyst, the reformer reforming the raw fuel by utilizing at least a steam reforming reaction and a partial oxidation reaction;

a raw fuel supply device that supplies the reformer with the raw fuel;

a water supply device that supplies the reformer with water so that at least a part of the supplied water is used for the steam reforming reaction;

an oxygen supply device that supplies the reformer with oxygen so that at least a part of the supplied oxygen is used for the partial oxidation reaction of the raw fuel at the reforming catalyst; and

a controller that controls the raw fuel supply device, the water supply device and the oxygen supply device,

wherein the controller executes a normal operation of the reformer and a carbon removal process for removing carbon deposited on the reforming catalyst under a predetermined condition, by controlling at least one of an amount of the raw fuel supplied to the reformer and an amount of the oxygen supplied to the reformer so that an O/C ratio of the number of oxygen atoms O supplied from the oxygen supply device to the number of carbon atoms contained in the raw fuel supplied from the raw fuel supply device becomes larger than an appropriate range of the O/C ratio that is to be established during the normal operation of the reformer, and

wherein the controller selects one of a plurality of carbon removal modes that are prepared in advance, depending upon the amount of the accumulated carbon, the carbon removal process is carried out in the selected carbon removal mode.

2. (Original) A fuel reforming apparatus according to claim 1, wherein the controller calculates an amount of carbon accumulated in the reformer, based on a history of an operating condition of the reformer, and executes the carbon removal process when the amount of the accumulated carbon exceeds a predetermined threshold value.

3-13. (Canceled)

14. (Original) A fuel reforming apparatus according to claim 1, wherein the controller executes the carbon removal process by controlling the amount of the oxygen supplied to the reformer to be larger than a predetermined amount thereof that is set for the normal operation of the reformer.

15. (Canceled)

16. (Original) A fuel reforming apparatus according to claim 1, wherein the controller intermittently executes the carbon removal process a plurality of times.

17. (Original) A fuel reforming apparatus according to claim 16, wherein the controller calculates an amount of carbon accumulated in the reformer, based on a history of an operating condition of the reformer, and executes the carbon removal process when the amount of the accumulated carbon exceeds a predetermined threshold value.

18-22. (Canceled)

23. (Original) A fuel reforming apparatus according to claim 16, wherein the controller executes the carbon removal process by controlling the amount of the oxygen supplied to the reformer to be larger than a predetermined amount thereof that is set for the normal operation of the reformer.

24-37. (Canceled)